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Approved For Release 2005/05/02 : CIA-RDP78B04770A001200010008-1

DDI 1054-68

NPIC/D-94-68

8 APR 1968

MEMORANDUM FOR: Deputy Director for Intelligence

SUBJECT : Proposed R&D Project for PI Comparator

1. This memorandum requests approval to commit funds for the development of a PI comparator. The specific request is stated in paragraph eight.
2. The requirement for this project originated with the photo interpretation components in the Imagery Analysis Service and NPIC.
3. Measurement of items on photography are done by two separate groups in the Center; namely, the photogrammetrists and the photo interpreters. The measurements done by the photogrammetrist serve as the authoritative base for published reports and data base inclusion. The measurements of the PI serve as a complement to other tools of identification and interpretation. Interpreters have adequate direct viewing equipment available or under development, but until now have had no stereoscopic measurements capability consistent with the "sophistication" of the imagery. The Twin Stage Comparator is intended to provide the interpreter with such a measurement capability, and bridge the gap between the very high precision measurement instruments available to the photogrammetrists and the presently used scales and reticles which the interpreter uses for measurements when higher accuracy is not needed.
4. With the advent of improved resolution of imagery there has been a quantum jump in requests and needs for measurement data. These needs are certain to surpass the capacity of highly-skilled photogrammetrists and their complex equipments. It will be of increasing importance to supplement this work by having imagery interpreters do measurement work with equipment such as the Twin Stage Comparator.
5. Technical details of the project are described in the attached proposal. It calls for the design and fabrication of a comparator to be used on-line with existing Center data processing equipment. It includes means to record film distances as small as two microns for transmission either directly to the computer or to a card punch machine. The work will be performed in a single phase, and the prototype comparator is to be delivered within 12 months of the contract date.
6. Development Objectives for the project were submitted to nine manufacturers and proposals were received from six. The [] proposed the best overall design and offered the lowest price.

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GROUP 1
Excluded from automatic
downgrading and
declassification

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7. The project has been coordinated with DDS&T and with EXRAMD. There is no other equipment commercially available or under development which would satisfy the Center's needs in this field.

8. It is requested that approval be granted to negotiate with the [redacted] for a contract to build a prototype Two-Stage, On-Line FI Comparator at a cost of [redacted]

ARTHER C. LUNDHAL

Director

National Photographic Interpretation Center

Attachments: (2)

R&D Catalog Form

[redacted] Proposal

APPROVED: [redacted]

Deputy Director for Intelligence

11 APR 1968

Date

Distribution:

Original - NPIC/TSSG/SS/LB (After approval)

1 - DDI

2 - NPIC/OSIR

1 - NPIC/TSSG

1 - NPIC/TSSG/SS

1 - NPIC/TSSG/DED ✓

NPIC/TSSG/DED/[redacted] (4 Apr 68)

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R & D CATALOG FORM

DATE




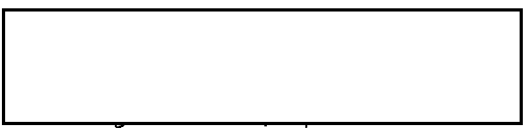
23 January 1968

1. PROJECT TITLE/CODE NAME TWIN-STAGE ON-LINE PI COMPARATOR		2. SHORT PROJECT DESCRIPTION Develop a twin-stage four-axis comparator for use by the operational P.I. in rapid response situations.	
3. CONTRACTOR NAME <div></div>		4. LOCATION OF CONTRACTOR <div></div>	
5. CLASS OF CONTRACTOR Manufacturer		6. TYPE OF CONTRACT Fixed-Price	
7. FUNDS FY 19 67 \$ NONE FY 19 68 \$ <div></div> FY 19 \$ NONE		8. REQUISITION NO.	9. BUDGET PROJECT NO. NP-V-22-02228
		10. EFFECTIVE CONTRACT DATE (Begin - end)	11. SECURITY CLASS. A.A. - Confidential T. - Unclassified W. - Unclassified
12. RESPONSIBLE DIRECTORATE/OFFICE/PROJECT OFFICER TELEPHONE EXTENSION DDI/NPIC/TSSG/ <div></div>			
13. REQUIREMENT/AUTHORITY A requirement exists for an instrument which will enable the P.I. and analyst to make rapid and accurate measurements on photography.			
14. TYPE OF WORK TO BE DONE Design and fabricate a two-stage, four-axis prototype comparator capable of 5 micron accuracy.			
15. CATEGORIES OF EFFORT			
MAJOR CATEGORY Viewing System		SUB-CATEGORIES Electronics Optics Reporting Systems	
16. END ITEM OR SERVICES FROM THIS CONTRACT/IMPROVEMENT OVER CURRENT SYSTEM, EQUIPMENT, ETC. The end item will be a four-axis stereo comparator that the operational P.I. and analyst can use on-line to the central computer during the normal mission.			
17. SUPPORTING OR RELATED CONTRACTS (Agency & Other)/COORDINATION There is no known equivalent device under consideration by the community.			
18. DESCRIPTION OF INTELLIGENCE REQUIREMENT AND DETAILED TECHNICAL DESCRIPTION OF PROJECT (Continue on addi- tional page if required) This instrument will enable the operational P.I.s without experience in photogrammetric procedures, to obtain accurate dimensions from photo imagery in quick response situations.			
19. APPROVED BY AND DATE			
OFFICE	DEPUTY DIRECTOR		DDCI

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SPEED LETTER	REPLY REQUESTED		DATE 5 January 1968
	X	YES	NO
		LETTER NO. IAS/TA- 1/68	
TO : Chief, Development Staff, NPIC 		FROM: Imagery Analysis Service	
ATTN: 			
SUBJECT: Request for Digitizing Twin-Stage PI Comparator and Fiber-Optics Viewer			
<p>1. Since NPIC is unable to provide sufficient mensuration support to IAS, we must have the capability to accomplish a portion of our mensural requirements using in-house equipment and manpower. Therefore, we consider it extremely important that you take action to digitize both stages on the prototype Twin-Stage PI Comparator so that height measurements can be derived by parallax techniques.</p> <p>2. If funds permit, we also request that our Fiber-Optics Viewer be retrofitted with digitizers on all four axis; and that the necessary  components, including a card punch coupler, be added to give this instrument both an on-line and off-line mensuration capability.</p> <p>3. Please give us your decision on these requests as soon as possible.</p> <p style="text-align: right;"></p> <p style="text-align: right;">DIRECTOR, IMAGERY ANALYSIS SERVICE</p>			
REPLY		SIGNATURE	
		DATE	
		SIGNATURE	

RETURN TO ORIGINATOR

SECRET